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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/763,130 | 01/22/2004 | Stephen Potts | 1381-031701 | 6405 |

28289 7590 10/20/2005

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| EXAMINER |
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REESE, DAVID C

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| ART UNIT | PAPER NUMBER |
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3677

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/763,130

Applicant(s)

POTTS ET AL.

Examiner

David C. Reese

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to Applicant's amendment filed 8/11/2005.

Status of Claims

- [1] Claims 1-20 are pending.

Specification

- [2] The disclosure was previously objected to for informalities. Applicant has successfully addressed these issues in the amendment filed on 8/11/2005. Accordingly, the objection(s) to the specification have been withdrawn.

Claim Objections

- [3] Claim(s) 1 were previously objected to because of informalities. Applicant has successfully addressed these issues in the amendment filed on 8/11/2005. Accordingly, the objection(s) to the claim(s) have been withdrawn. In view amended claim 1, however, it appears as if the statement, "the entire" lacks antecedent basis in the instant claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

- [4] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

[5] Claims 1, 3-10, 12-15, and 17-19 are rejected under 35 U.S.C. 102(b) as clearly anticipated by Van Gijssel et al., US- 6,290,426, because the invention was patented or described in a printed publication in this or a foreign country, or in public use or on sale in this country more than one (1) year prior to the application for patent in the United States.

Van Gijssel et al. teach of a threaded rod and strut connector and method allowing optimum loading in an axial direction of the rod.

As for Claim 1, Van Gijssel et al. teach of a connector comprising:

an engaging member (12), the engaging member (12) having a body defining a threaded engaging member hole (from col. 3, beginning with line 57, "12 includes a central plate 30 with an extruded central hole 31 having internal rolled threads 32. The internal threads 32 in the hole 31 match the external threads 33 on the threaded rod 16") and two planar abutting surfaces (35, 36) extending over the entire length of each abutting surface (35,36);

a lock having a lock body with a base defining a lock hole spatially aligned with the threaded engaging member hole, wherein said lock coacts with the engaging member (14 in Fig. 9);

a fastener extending along a longitudinal axis threadably engaged with the engaging member hole and passing through the lock hole (16 in Fig. 9); and

a stop attached to said fastener coacting with said lock (70 in Fig. 9);

The following is an example of intended use, as it does not further limit the structure of the claimed invention.

“whereby the engaging member is adapted to move along the longitudinal axis relative to the fastener when the fastener is rotated about the longitudinal axis”.

Note that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

It has been held that the functional “whereby” statement does not define any structure and accordingly cannot serve to distinguish. *In re Mason*, 114 USPQ 127, 44 CCPA 937 (1957).

Also, it has been held that the recitation that an element is “adapted to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

Re: Claim 3, wherein the engaging member has two non-abutting surfaces (12 in Fig. 9) and the lock body has a first vertical arm extending from the base, wherein the first vertical arm abuts one of the two non-abutting surfaces of the engaging member (64 in Fig. 9).

Re: Claim 4, wherein the lock body has a second vertical arm extending from a second side of the planar base in parallel with the first vertical arm, wherein the second vertical arm abuts the other of the two non-abutting surfaces of the engaging member (Fig. 9).

Re: Claim 5, wherein the stop is a nut (70 in Fig. 9) defining a threaded hole threadably received by the fastener (16 in Fig. 9), the lock body includes a lock member positioned between the nut and the engaging member (14 in Fig. 9).

Re: Claim 6, wherein the base of the lock body has a first wing and a second wing extending therefrom (64 in Fig. 9).

Re: Claim 7, wherein said fastener is a bolt (16 in Fig. 9).

As for Claim 8, Van Gijssel et al. teach of a connector comprising:

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an engaging member (12), the engaging member (12) having a body defining a threaded engaging member hole (from col. 3, beginning with line 57, “12 includes a central plate 30 with an extruded central hole 31 having internal rolled threads 32. The internal threads 32 in the hole 31 match the external threads 33 on the threaded rod 16”), two planar abutting surfaces (35, 36) extending over the entire length of each abutting surface (35,36), and two non-abutting surfaces (39);

a lock having a lock body with a planar base defining a lock hole coaxial aligned with the threaded engaging member hole, the base having two spatially separated vertical arms that define an engaging member receiving recess, wherein the arms coact with the two non-abutting surfaces of the engaging member (14 in Fig. 9);

a threaded fastener extending along a longitudinal axis threadably engaged with the engaging member hole and engaged with the lock hole (16 in Fig. 9); and

a stop having a threaded stop hole threadably received by the fastener (70 in Fig. 9);

The following is an example of intended use, as it does not further limit the structure of the claimed invention.

“whereby the engaging member is adapted to move along the longitudinal axis when said fastener is rotated about a longitudinal axis, and whereby the engaging member is able to be restrained from rotating about the longitudinal axis by the lock”.

Note that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

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It has been held that the functional “whereby” statement does not define any structure and accordingly cannot serve to distinguish. *In re Mason*, 114 USPQ 127, 44 CCPA 937 (1957).

Also, it has been held that the recitation that an element is “adapted to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

It has been held that the recitation that an element is “capable of” (is able to) performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

Re: Claim 9, wherein the two non-abutting surfaces of the engaging member are contained in parallel planes and at least one of an inner surface of the vertical arms extends in the parallel planes (Fig. 9).

Re: Claim 10, wherein the two abutting surfaces are non-parallel diverging surfaces (Fig. 9).

Re: Claim 12, wherein the stop is a nut defining a threaded hole threadably received by the threaded fastener (70 in Fig. 9), the lock body includes a lock member positioned between the nut and the engaging member (14 in Fig. 9).

Re: Claim 13, wherein the base of the lock body has a first wing and a second wing extending therefrom (64 in Fig. 9).

Re: Claim 14, wherein the fastener is a bolt (16 in Fig. 9).

As for Claim 15, Van Gijssel et al. teach of a connector comprising:

a supporting structure having a body (18 in Fig. 9), the supporting body defining a rib (18 in Fig. 7), the rib having a recess with converging walls (26 in Fig. 7);

an engaging member (12), the engaging member (12) having a body defining a threaded engaging member hole (from col. 3, beginning with line 57, “12 includes a central plate 30 with

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an extruded central hole 31 having internal rolled threads 32. The internal threads 32 in the hole 31 match the external threads 33 on the threaded rod 16”) and two planar abutting surfaces (35, 36) extending over the entire length of each abutting surface (35,36);

a lock having a lock body with a base defining a lock hole spatially aligned with the threaded engaging member hole, wherein said lock coacts with the engaging member (14 in Fig. 9);

a stop, the stop having a body defining a threaded stop hole (70 in Fig. 9); and

a fastener extending along a longitudinal axis threadably engaged with the engaging member hole, engaged with the lock hole, and threadably engaged with the stop hole (16 in Fig. 9),

whereby the two abutting surfaces of the engaging member coact over their respective surfaces entirely with the converging walls of the rib (36, 36 onto 26,27 in Fig. 7 and 9).

Re: Claim 17, wherein the engaging member has two non-abutting surfaces (12 in Fig. 9) and the lock body has a first vertical arm extending from the base (64 in Fig. 9), wherein the first vertical arm abuts one of the two non-abutting surfaces of the engaging member (Fig. 9).

Re: Claim 18, wherein the lock body has a second vertical arm extending from a second side of the base in parallel with the first vertical arm (64 in Fig. 9), wherein the second vertical arm abuts at one of the two non-abutting surfaces of the engaging member (Fig. 9).

As for Claim 19, Van Gijssel et al. teach of a method for using a connector comprising the steps of:

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- a) providing a supporting structure having a body (18 in Fig. 9), said supporting structure body defining a rib (18 in Fig. 7), the rib having a recess with converging walls (26 and 27 in Fig. 7);
- b) providing an engaging member (12), the engaging member (12) having a body defining a threaded engaging member hole (from col. 3, beginning with line 57, "12 includes a central plate 30 with an extruded central hole 31 having internal rolled threads 32. The internal threads 32 in the hole 31 match the external threads 33 on the threaded rod 16"), two planar abutting surfaces (35, 36) extending over the entire length of each abutting surface (35,36), and two non-abutting surfaces (39);
- c) providing a lock having a lock body defining a lock hole spatially aligned with the threaded engaging member hole, wherein the lock coacts with the engaging member (14 in fig. 9);
- d) providing a stop, the stop having a body defining a threaded stop hole (70 in Fig. 9);
- e) providing a fastener extending along a longitudinal axis threadably engaged with the engaging member hole, engaged with the lock hole, and threadably engaged with the stop hole (16 in Fig. 9), wherein the engaging member **is adapted to** move along a longitudinal axis relative to the fastener when the fastener is rotated about the longitudinal axis (Process of Figure 6 to Fig. 8);
- f) positioning the engaging member so as to have the non-abutting surfaces coact with the lock body (64 against 12 in Fig. 9);

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g) positioning the engaging member so as to have the two abutting surfaces (35,36) of the engaging member (12) coact over their respective surfaces (35,36) entirely with the converging walls of the rib (35,36 against 26 and 27 in Figs. 7 and 9), wherein the lock secures the engaging member in a desired position in the rib (70 in Figs. 7 and 9); and

h) moving the lock body along the longitudinal axis while rotating the fastener so that the surfaces of the lock contact the surfaces of the supporting structure and the surfaces of the engaging member contact the surfaces of the supporting structure (Process of Figure 6 to Figure 8).

Claim Rejections - 35 USC § 103

[6] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[7] Claims 2, 11, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Gijssel et al., US- 6,290,426 in view of Roellin, US-4,950,099.

Although the invention is not identically disclosed or described as set forth 35 U.S.C. 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a designer having ordinary skill in the art to which said subject matter pertains, the invention is not patentable.

Van Gijssel et al. teach of the above claims.

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However, Van Gijssel et al. fail to disclose expressly that the shape of the engaging member is that of a rectangular prism having a dovetail shape.

Roellin teaches of a releasable clamping-type compressive joint that utilizes an engaging member in a similar fashion as Van Gijssel, but the shape differs, as it resembles that of a rectangular prism having a dovetail shape.

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify the engaging member taught by Van Gijssel, to incorporate an additional embodiment as taught by Roellin, in order to create a design choice that will optimally fit against its respective converging walls, as it is important to correctly match the structure you are attempting to help restrain. That is, depending on the support structure and the shape of the walls, different shape engaging members may have to be used to properly articulate the connection for maximum support.

[8] Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Gijssel et al., US- 6,290,426.

It would be readily understood and appreciated by those of ordinary skill in the art, of the use of a washer in such a situation as the pertinent aspect of using a washer revolves around its ability to help increase the surface area, helping to disperse the force occurring at a major localized point. Though a washer is not used in Van Gijssel et al., it would be an obvious matter of design choice to incorporate such an additional structure to the device.

Response to Arguments

[9] Applicant's arguments filed 8/11/2005 regarding rejections under 35 U.S.C. 102 have been fully considered but they are not persuasive. All arguments concerning the amended claims are considered moot to new rejections (see above) based on said amendments above.

Conclusion

[10] Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

[11] Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Reese whose telephone number is (571) 272- 7082. The examiner can normally be reached on 7:30 am - 6:00 pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached at (571) 272-7075. **Please also note the change in the fax phone number to (571) 273-8300 for the organization where this application or proceeding is assigned.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sincerely,
David Reese
Assistant Examiner
Art Unit 3677

DCR


ROBERT J. SANDY
PRIMARY EXAMINER